



PTO/SB/21 (09-04)

**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/801,361
Filing Date	March 15, 2004
First Named Inventor	Stephen R. Quake
Art Unit	1743
Examiner Name	Not Assigned
Attorney Docket Number	20174C-001140US

**ENCLOSURES (Check all that apply)**

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Fee Transmittal Form<br><input type="checkbox"/> Fee Attached<br><input type="checkbox"/> Amendment/Reply<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Extension of Time Request<br><input type="checkbox"/> Express Abandonment Request<br><input checked="" type="checkbox"/> Information Disclosure Statement<br><br><input type="checkbox"/> Certified Copy of Priority Document(s)<br><input type="checkbox"/> Reply to Missing Parts/ Incomplete Application<br><input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Licensing-related Papers<br><input type="checkbox"/> Petition<br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation<br>Change of Correspondence Address<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Request for Refund<br><input type="checkbox"/> CD, Number of CD(s) _____<br><input type="checkbox"/> Landscape Table on CD | <input type="checkbox"/> After Allowance Communication to TC<br><input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):<br>SB/08<br>224 references<br>Return postcard |
|---|---|---|

Remarks

The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name	Townsend and Townsend and Crew LLP		
Signature			
Printed name	Patrick M. Boucher		
Date	November 16, 2005	Reg. No.	44,037

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Signature			
Typed or printed name	Janet L. Newmaker	Date	November 16, 2005

IFW

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

PATENT  
Attorney Docket No.: 20174C-001140US  
Client Reference Nos.: CIT 3153-CIP-C  
and C111.410C1.US

On November 16, 2005

TOWNSEND and TOWNSEND and CREW LLP

By: Janet L. Newmaker  
Janet L. Newmaker



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Stephen R. Quake et al.

Application No.: 10/801,361

Filed: March 15, 2004

For: Integrated Active Flux  
Microfluidic Devices And  
Methods

Customer No.: 20350

Confirmation No.: 3231

Examiner: Not Assigned

Art Unit: 1743

**SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT UNDER  
37 CFR §§ 1.97 AND 1.98**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the non-US references (in compliance with the requirements of 1287 OG 163) are enclosed.

It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicants believe that no fee is required for submission of this statement. If a fee is required, however, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Patrick M. Boucher  
Reg. No. 44,037

Date: November 16, 2005

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, CA 94111-3834  
Tel: 303-571-4000  
Fax: 415-576-0300  
PMB/jln  
60634989 v1



PTO/SB/08A (08-03)

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet 1 of 19

## Complete if Known

Application Number	10/801,361
Filing Date	March 15, 2004
First Named Inventor	Stephen R. Quake
Art Unit	1743
Examiner Name	Not Assigned
Attorney Docket Number	20174C-001140US

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
	A1	US-2,656,508	10-20-1953	Coulter	
	A2	US-3,560,754	02-02-1971	Kamentsky	
	A3	US-3,570,515	03-16-1971	Kinner	
	A4	US-3,747,628	07-24-1973	Holster et al.	
	A5	US-4,046,159	09-06-1977	Pegourie	
	A6	US-4,119,368	10-10-1978	Yamakazi	
	A7	US-4,153,855	05-08-1979	Feingold	
	A8	US-4,245,673	01-20-1981	Bouteille et al.	
	A9	US-4,434,704	03-06-1984	Surjaatmadja	
	A10	US-4,675,300	06-23-1987	Zare et al.	
	A11	US-4,786,165	11-22-1988	Yamamoto et al.	
	A12	US-4,898,582	02-06-1990	Faste	
	A13	US-4,908,112	03-13-1990	Pace	
	A14	US-4,963,498	10-16-1990	Hillman et al.	
	A15	US-4,992,312	02-12-1991	Frisch	
	A16	US-5,032,381	07-16-1991	Bronstein et al.	
	A17	US-5,085,562	02-04-1992	Van Lintel	
	A18	US-5,088,515	02-18-1992	Kamen	
	A19	US-5,096,388	03-17-1992	Weinberg	
	A20	US-5,126,022	06-30-1992	Soane et al.	
	A21	US-5,126,115	06-30-1992	Fujita et al.	
	A22	US-5,140,161	08-18-1992	Hillman et al.	
	A23	US-5,164,558	11-17-1992	Huff et al.	
	A24	US-5,164,598	11-17-1992	Hillman et al.	
	A25	US-5,171,132	12-15-1992	Miyazaki	
	A26	US-5,224,843	07-06-1993	Van Lintel	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
Examiner Name	Not Assigned				
Sheet	2	of	19	Attorney Docket Number	20174C-001140US

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
	A27	US-5,259,737	11-09-1993	Kamisuki et al.	
	A28	US-5,265,327	11-30-1993	Faris et al.	
	A29	US-5,271,724	12-21-1993	van Lintel	
	A30	US-5,290,240	03-01-1994	Horres, Jr.	
	A31	US-5,336,062	08-09-1994	Richter	
	A32	US-5,346,372	09-13-1994	Naruse et al.	
	A33	US-5,375,979	12-27-1994	Trah	
	A34	US-5,376,252	12-27-1994	Ekstrom	
	A35	US-5,400,741	03-28-1995	DeTitta et al.	
	A36	US-5,423,287	06-13-1995	Usami et al.	
	A37	US-5,434,049	07-18-1995	Okuno et al.	
	A38	US-5,452,878	09-26-1995	Gravesen et al.	
	A39	US-5,486,335	01-23-1996	Wilding et al.	
	A40	US-5,498,392	03-12-1996	Wilding et al.	
	A41	US-5,500,071	03-19-1996	Kaltenbach et al.	
	A42	US-5,512,131	04-30-1996	Kumar et al.	
	A43	US-5,529,465	06-25-1996	Zengerle et al.	
	A44	US-5,558,998	09-24-1996	Hammond et al.	
	A45	US-5,580,523	12-03-1996	Bard	
	A46	US-5,589,136	12-31-1996	Northrup et al.	
	A47	US-5,593,130	01-14-1997	Hansson et al.	
	A48	US-5,632,876	05-27-1997	Zanzucchi et al.	
	A49	US-5,641,400	06-24-1997	Kaltenbach et al.	
	A50	US-5,642,015	06-24-1997	Whitehead et al.	
	A51	US-5,659,171	08-19-1997	Young et al.	
	A52	US-5,660,370	08-26-1997	Webster	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
Examiner Name	Not Assigned				
Sheet	3	of	19	Attorney Docket Number	20174C-001140US

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
	A53	US-5,661,222	08-26-1997	Hare	
	A54	US-5,681,024	10-28-1997	Lisec et al.	
	A55	US-5,702,618	12-30-1997	Saaski et al.	
	A56	US-5,705,018	01-06-1998	Hartley	
	A57	US-5,716,852	02-10-1998	Yager et al.	
	A58	US-5,726,751	03-10-1998	Altendorf et al.	
	A59	US-5,750,015	05-12-1998	Soane et al.	
	A60	US-5,757,482	05-26-1998	Fuchs et al.	
	A61	US-5,759,014	06-02-1998	Van Lintel	
	A62	US-5,775,371	07-07-1998	Pan et al.	
	A63	US-5,788,468	08-04-1998	Dewa et al.	
	A64	US-5,800,690	09-01-1998	Chow et al.	
	A65	US-5,833,926	11-10-1998	Wurzel et al.	
	A66	US-5,836,750	11-17-1998	Cabuz	
	A67	US-5,837,200	11-17-1998	Diessel et al.	
	A68	US-5,842,787	12-01-1998	Kopf-Sill et al.	
	A69	US-5,852,495	12-22-1998	Parce	
	A70	US-5,856,174	01-05-1999	Lipshutz et al.	
	A71	US-5,863,801	01-26-1999	Southgate et al.	
	A72	US-5,869,004	02-09-1999	Parce et al.	
	A73	US-5,875,817	03-02-1999	Carter	
	A74	US-5,876,187	03-02-1999	Afromowitz	
	A75	US-5,880,071	03-09-1999	Parce et al.	
	A76	US-5,904,824	05-18-1999	Oh	
	A77	US-5,932,799	08-03-1999	Moles	
	A78	US-5,942,443	08-24-1999	Parce et al.	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
Sheet	4	of	19	Examiner Name	Not Assigned
				Attorney Docket Number	20174C-001140US

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
	A79	US-6,007,309	12-28-1999	Hartley	
	A80	US-6,117,634	09-12-2000	Langmore et al.	
	A81	US-6,123,769	09-26-2000	Sanjoh	
	A82	US-6,155,282	12-05-2000	Zachary et al.	
	A83	US-6,174,365 B1	01-16-2001	Sanjoh	
	A84	US-6,221,654 B1	04-24-2001	Quake et al.	
	A85	US-6,296,673 B1	10-02-2001	Santarsiero et al.	
	A86	US-2001/0027745 A1	10-11-2001	Weigl et al.	
	A87	US-6,345,502 B1	02-12-2002	Tai et al.	
	A88	US-2002/0037499 A1	03-28-2002	Quake et al.	
	A89	US-6,409,832 B2	06-25-2002	Weigl et al.	
	A90	US-2003/0008308 A1	01-09-2003	Enzelberger et al.	
	A91	US-6,540,895 B2	04-01-2003	Quake et al.	
	A92	US 2004/0115838 A1	06-17-2004	Quake et al.	
	A93	US-6,767,706 B2	07-27-2004	Quake et al.	
	A94	US-6,833,242 B2	12-21-2004	Quake et al.	
	A95	US-6,960,437	11-01-2005	Enzelberger et al.	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>		
				Application Number	10/801,361	
				Filing Date	March 15, 2004	
				First Named Inventor	Stephen R. Quake	
				Art Unit	1743	
Examiner Name	Not Assigned					
Sheet	5	of	19	Attorney Docket Number	20174C-001140US	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	B1	EP	0 592 094	A2	04-13-1994	International Business Machines Corporation		<input type="checkbox"/>
	B2	EP	0 703 364	A1	03-27-1996	Fraunhofer- Gesellschaft Zur Förderung Der Angewandten Forschung E.V.		<input type="checkbox"/>
	B3	EP	0 706 004	A2	04-10-1996	Bayer Corporation		<input type="checkbox"/>
	B4	EP	0 745 682	B1	12-04-1996	Bayer AG		<input type="checkbox"/>
	B5	EP	0 778 351	B1	06-11-1997	Hitachi, Ltd.		<input type="checkbox"/>
	B6	EP	0 779 436	A2	06-18-1997	Frank T. Hartley		<input type="checkbox"/>
	B7	EP	0 829 360	A2	03-18-1998	Xerox Corporation		<input type="checkbox"/>
	B8	EP	0 845 603	A1	06-03-1998	Xerox Corporation		<input type="checkbox"/>
	B9	EP	0 999 055	A2	05-10-2000	Samsung Electronics Co., Ltd.		<input type="checkbox"/>
	B10	GB	2 155 152	A	09-18-1985	Allied Corporation		<input type="checkbox"/>
	B11	GB	2 264 296	A	08-25-1993	Zortech International Limited		<input type="checkbox"/>
	B12	GB	2 264 496	A	09-01-1993	United States Department of Energy		<input type="checkbox"/>
	B13	GB	2 308 460	A	06-25-1997	Daewoo Electronics Co., Ltd.		<input type="checkbox"/>
	B14	WO	91/13338	A2	09-05-1991	Hatfield Polytechnic Higher Education Corporation		<input type="checkbox"/>
	B15	WO	91/15750	A1	10-17-1991	Carrimed Ltd.		<input type="checkbox"/>
	B16	WO	94/05414	A1	03-17-1994	The Regents of the University of California		<input type="checkbox"/>
	B17	WO	95/33846	A1	12-14-1995	Affymax Technologies N.V.		<input type="checkbox"/>

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.



Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/801,361
				Filing Date	March 15, 2004
				First Named Inventor	Stephen R. Quake
				Art Unit	1743
Examiner Name	Not Assigned				
Sheet	6	of	19	Attorney Docket Number	20174C-001140US

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	B18	WO	95/33853	A1	12-14-1995	University of Tennessee Research Corporation		<input type="checkbox"/>
	B19	WO	97/02357	A1	01-23-1997	Affymetrix, Inc.		<input type="checkbox"/>
	B20	WO	97/38300	A1	10-16-1997	Soane Biosciences		<input type="checkbox"/>
	B21	WO	98/07069	A1	02-19-1998	The Regents Of The University Of Michigan		<input type="checkbox"/>
	B22	WO	98/08931	A1	03-05-1998	BTG USA Inc.		<input type="checkbox"/>
	B23	WO	99/00655	A2	01-07-1999	Immunetics		<input type="checkbox"/>
	B24	WO	99/04361	A1	01-28-1999	Diversified Scientific, Inc.		<input type="checkbox"/>
	B25	WO	99/17093	A1	04-08-1999	The Regents Of The University Of Michigan		<input type="checkbox"/>
	B26	WO	99/52633	A1	10-21-1999	Luminal Technologies, L.P.		<input type="checkbox"/>
	B27	WO	00/00678	A1	01-06-2000	University Of Washington		<input type="checkbox"/>
	B28	WO	00/43748	A1	07-27-2000	YSI Incorporated		<input type="checkbox"/>
	B29	WO	00/60345	A1	10-12-2000	University Of Alabama At Birmingham Research Foundation		<input type="checkbox"/>
	B30	WO	01/09595	A2	02-08-2001	Emerald Biostructures, Inc.		<input type="checkbox"/>
	B31	WO	01/09595	A3	02-08-2001	Emerald Biostructures, Inc.		<input type="checkbox"/>

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
			Examiner Name	Not Assigned	
Sheet	7	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C1	"Biochips," Nature Biotechnology, Vol. 18, Supplement 2000, pp. IT43-IT44, 2000		
	C2	"Chapter 9: Microfluidic Devices," Micromachined Transducers Sourcebook, pp. 779-882, 1998		
	C3	"Electro Microfluidic Dual In-Line Package (EMDIP)," Sandia National Laboratories, 2 pages, no date		
	C4	"Last Chance For Micromachines," The Economist Technology Quarterly, printed from website <a href="http://www.economist.com/science/displayStory.cfm?Story_ID=442930">http://www.economist.com/science/displayStory.cfm?Story_ID=442930</a> on 1/25/2001, 8 pages, 12/7/2000		
	C5	AFFHOLTER, JOSEPH et al., "Engineering A Revolution," Chemistry in Britain, pp. 48-51, 4/1999		
	C6	AHN, CHONG H. et al., "Fluid Micropumps Based On Rotary Magnetic Actuators," Proceedings of 1995 IEEE Micro Electro Mechanical Systems Workshop (MEMS '95), Amsterdam, Netherlands, pp. 408-412, 1/29-2/2/1995		
	C7	ANDERSON, JANELLE R. et al., "Fabrication Of Topologically Complex Three-Dimensional Microfluidic Systems In PDMS By Rapid Prototyping," Analytical Chemistry, Vol. 72, No. 14, pp. 3158-3164, 7/15/2000		
	C8	ANDERSON, ROLFE C. et al., "Microfluidic Biochemical Analysis System," Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, Chicago, Illinois, pp. 477-480, 6/16-19/1997		
	C9	ARMANI, DENIZ et al., "Re-Configurable Fluid Circuits By PDMS Elastomer Micromachining," IEEE Int. Conf. Micro Electro Mech. Syst. Tech. Digest, Vol. 12, pp. 222-227, 1999		
	C10	ARNOLD, FRANCES H., "Design By Directed Evolution," Accounts of Chemical Research, Vol. 31, No. 3, pp. 125-131, 1998		
	C11	ASHKIN, A. et al., "Optical Trapping And Manipulation Of Single Cells Using Infrared Laser Beams," Nature, Vol. 330, No. 24, pp. 769-771, 12/31/1987		
	C12	ASHKIN, A. et al., "Optical Trapping And Manipulation Of Viruses And Bacteria," Science, Vol. 235, pp. 1517-1520, 3/20/1987		
	C13	BALLANTYNE, J. P. et al., "Selective Area Metallization By Electron-Beam Controlled Direct Metallic Deposition," J. Vac. Sci. Technol., Vol. 10, No. 6, pp. 1094-1097, 11/1973		
	C14	BEIN, THOMAS, "Efficient Assays For Combinatorial Methods For The Discovery Of Catalysts," Angew. Chem. Int. Ed., Vol. 38, No. 3, pp. 323-326, 1999		
	C15	BENARD, W. L. et al., "A Titanium-Nickel Shape-Memory Alloy Actuated Micropump," Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, Chicago, Illinois, pp. 361-364, 6/16-19/1997		

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
			Examiner Name	Not Assigned	
Sheet	8	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C16	BLOOMSTEIN, T. M. et al., "Laser-Chemical Three-Dimensional Writing For Microelectromechanics And Application To Standard-Cell Microfluidics," J. Vac. Sci. Technol. B, Vol. 10, No. 6, pp. 2671-2674, 11/1992		
	C17	BOUSSE, LUC et al., "Electrokinetically Controlled Microfluidic Analysis Systems," Annu. Rev. Biophys. Biomol. Struct., Vol. 29, pp. 155-181, 2000		
	C18	BRECHTEL, R. et al., "Control Of The Electroosmotic Flow By Metal-Salt-Containing Buffers," Journal of Chromatography A, Vol. 716, pp. 97-105, 1995		
	C19	BRYZEK, JANUSZ et al., "Micromachines On The March", IEEE Spectrum, Vol. 31, No. 5, pp. 20-31, 5/1994		
	C20	BUCHAILLOT, LIONEL et al., "Silicon Nitride Thin Films Young's Modulus Determination By An Optical Non Destructive Method," Jpn. J. Appl. Phys., Vol. 36, Part 2, No. 6B, pp. L794-L797, 6/15/1997		
	C21	BUDOWLE, BRUCE et al., "Analysis Of The VNTR Locus DIS80 By The PCR Followed By High-Resolution PAGE," Am. J. Hum. Genet., Vol. 48, pp. 137-144, 1991		
	C22	BUICAN, TUDOR N. et al., "Automated Single-Cell Manipulation And Sorting By Light Trapping," Applied Optics, Vol. 26, No. 24, pp. 5311-5316, 12/15/1987		
	C23	BURBAUM, JONATHAN J. et al., "New Technologies For High-Throughput Screening," Current Opinion in Chemical Biology, Vol. 1, pp. 72-78, 1997		
	C24	BUSCH, J. et al., "Methods For The Differentiation Of Microorganisms, Journal of Chromatography B, Vol. 722, pp. 263-278, 1999		
	C25	CAI, WEIWEN, et al., "High-Resolution Restriction Maps Of Bacterial Artificial Chromosomes Constructed By Optical Mapping," Proc. Natl. Acad. Sci. USA, Vol. 95, pp. 3390-3395, 3/1998		
	C26	CALKINS, KATHRYN, "Mycometrix: Rubber Chips," BioCentury, 2 pages, 10/16/2000		
	C27	CHAN, JASON H. et al., "Microfabricated Polymer Devices For Automated Sample Delivery Of Peptides For Analysis By Electrospray Ionization Tandem Mass Spectrometry," Analytical Chemistry, Vol. 71, No. 20, pp. 4437-4444, 10/15/1999		
	C28	CHIANG, YUH-MIN et al., "Characterizing The Process Of Cast Molding Microfluidic Systems," SPIE, Vol. 3877, pp. 303-311, 9/1999		
	C29	CHIU, CHI-SUNG et al., "Single Molecule Measurements Calibrate Green Fluorescent Protein Surface Densities On Transparent Beads For Use With 'Knock-In' Animals And Other Expression Systems," Journal of Neuroscience Methods, Vol. 105, pp. 55-63, 2001		
	C30	CHIU, DANIEL T. et al., "Patterned Deposition Of Cells And Proteins Onto Surfaces By Using Three-Dimensional Microfluidic Systems," PNAS, Vol. 97, No. 6, pp. 2408-2413, 3/14/2000		

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
			Examiner Name	Not Assigned	
Sheet	9	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C31	CHOU, HOU-PU et al., "A Microfabricated Rotary Pump," Biomedical Microdevices, Vol. 3, No. 4, pp. 323-330, 2001		
	C32	CHOU, HOU-PU et al., "Disposable Microdevices For DNA Analysis And Cell Sorting," Proc. Solid-State Sensor and Actuator Workshop, Hilton Head, South Carolina, pp. 11-14, 6/8-11/1998		
	C33	CHOU, HOU-PU et al., "Integrated Elastomer Fluidic Lab-On-A-Chip-Surface Patterning And DNA Diagnostics," Proceedings of the Solid State Actuator and Sensor Workshop, Hilton Head, South Carolina, 4 pages, 2000		
	C34	CHOU, HOU-PU, "Microfabricated Devices For Rapid DNA Diagnostics," Doctoral Thesis, California Institute of Technology, pp. i-xii and 1-106, 5/30/2000		
	C35	CHOU, HOU-PU et al., "Microfabricated Devices For Sizing DNA And Sorting Cells," Micro- and Nanofabricated Structures and Devices for Biomedical Environmental Applications, Proceedings of SPIE, Vol. 3258, pp. 181-187, 1998		
	C36	CHOU, HOU-PU et al., "Multiple Disease Diagnostics On A Single Chip," Biophysics Lab, Caltech, pp. 1-4, 3/1/2000		
	C37	CROSLAND-TAYLOR, P. J., "A Device For Counting Small Particles Suspended In A Fluid Through A Tube," Nature, Vol. 171, pp. 37-38, 1/3/1953		
	C38	DAVILA, HERMAN MORENO, "Molecular And Functional Diversity Of Voltage-Gated Calcium Channels," Annals of the New York Academy of Sciences, Vol. 868, pp. cover, 102-117, 1999		
	C39	DHARMATILLEKE, SAMAN et al., "Three-Dimensional Silicone Device Fabrication And Interconnection Scheme For Microfluidic Applications Using Sacrificial Wax Layers," Micro-Electro-Mechanical Systems (MEMS), Vol. 2, pp. 413-418, 2000		
	C40	DUFFY, DAVID C. et al., "Patterning Electroluminescent Materials With Feature Sizes As Small As 5µm Using Elastomeric Membranes As Masks For Dry Lift-Off," Advanced Materials, Vol. 11, No. 7, pp. 546-552, 1999		
	C41	DUFFY, DAVID C. et al., "Rapid Prototyping Of Microfluidic Switches In Poly(dimethyl siloxane) And Their Actuation By Electro-Osmotic Flow," J. Micromech. Microeng., Vol. 9, pp. 211-217, 1999		
	C42	DUFFY, DAVID C. et al., "Rapid Prototyping Of Microfluidic Systems In Poly(dimethylsiloxane)," Analytical Chemistry, Vol. 70, No. 23, pp. 4974-4984, 12/1/1998		
	C43	EFFENHAUSER, CARLO S. et al., "Integrated Capillary Electrophoresis On Flexible Silicone Microdevices: Analysis Of DNA Restriction Fragments And Detection Of Single DNA Molecules On Microchips," Analytical Chemistry, Vol. 69, No. 17, pp. 3451-3457, 9/1/1997		
	C44	EFFENHAUSER, CARLO S. et al., "Integrated Chip-Based Capillary Electrophoresis," Electrophoresis, Vol. 18, pp. 2203-2213, 1997		
	C45	ERICSON, CHRISTER et al., "Electroosmosis- And Pressure-Driven Chromatography In Chips Using Continuous Beds," Analytical Chemistry, Vol. 72, No. 1, 1/1/2000		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
			Examiner Name	Not Assigned	
Sheet	10	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C46	FAHRENBERG, J. et al., "A Microvalve System Fabricated By Thermoplastic Molding," J. Micromech. Microeng., Vol. 5, pp. 169-171, 1995		
	C47	FETTINGER, J. C. et al., "Stacked Modules For Micro Flow Systems In Chemical Analysis: Concept And Studies Using An Enlarged Model," Sensors and Actuators B, Vol. 17, pp. 19-25, 1993		
	C48	FIGEYS, DANIEL et al., "An Integrated Microfluidics-Tandem Mass Spectrometry System For Automated Protein Analysis," Analytical Chemistry, Vol. 70, No. 18, pp. 3728-3734, 9/15/1998		
	C49	FIGEYS, DANIEL et al., "Nanoflow Solvent Gradient Delivery From A Microfabricated Device For Protein Identifications By Electrospray Ionization Mass Spectrometry," Analytical Chemistry, Vol. 70, No. 18, pp. 3721-3727, 9/15/1998		
	C50	FOLCH, A. et al., "Molding Of Deep Polydimethylsiloxane Microstructures For Microfluidics And Biological Applications," Journal of Biomechanical Engineering, Vol. 121, pp. 28-34, 2/1999		
	C51	FULWYLER, M. J., "Electronic Separation Of Biological Cells By Volume," Science, pp. 910-911, 11/1965		
	C52	GALAMBOS, PAUL et al., "Electrical And Fluidic Packaging Of Surface Micromachined Electro-Microfluidic Devices," 8 pages, no date		
	C53	GAO, JUN et al., "Integrated Microfluidic System Enabling Protein Digestion, Peptide Separation, And Protein Identification," Analytical Chemistry, Vol. 73, No. 11, pp. 2648-2655, 6/1/2001		
	C54	GASS, V. et al., "Integrated Flow-Regulated Silicon Micropump," Sensors and Actuators A, Vol. 43, pp. 335-338, 1994		
	C55	GERLACH, TORSTEN, "Pumping Gases By A Silicon Micro Pump With Dynamic Passive Valves," Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, Chicago, Illinois, pp. 357-360, 6/16-19/1997		
	C56	GIUSTI, ALAN et al., "Application Of Deoxyribonucleic Acid (DNA) Polymorphisms To The Analysis Of DNA Recovered From Sperm," Journal of Forensic Science, Vol. 31, No. 2, pp. 409-417, 4/1986		
	C57	GOLL, C. et al., "Microvalves With Bistable Buckled Polymer Diaphragms," J. Micromech. Microeng., Vol. 6, pp. 77-79, 1996		
	C58	GONZALEZ, JESUS E. et al., "Improved Indicators Of Cell Membrane Potential That Use Fluorescence Resonance Energy Transfer," Chemistry & Biology, Vol. 4, No. 4, pp. 269-277, 4/1997		
	C59	GRAVESEN, PETER et al., "Microfluidics-A Review," J. Micromech. Microeng., Vol. 3, pp. 168-192, 1993		
	C60	GREENE, CHANA, "Characterizing The Properties Of PDMS," pp. 1-11, Summer 2000		
	C61	GUÉRIN, L. J. et al., "Simple And Low Cost Fabrication Of Embedded Micro-Channels By Using A New Thick-Film Photoplastic," Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, Chicago, Illinois, pp. 1419-1422, 6/18-19/1997		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
			Examiner Name	Not Assigned	
Sheet	11	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C62	HANES, JOZEF, et al., "In Vitro Selection And Evolution Of Functional Proteins By Using Ribosome Display," Proc. Natl. Acad. Sci. USA, Vol. 94, pp. 4937-4942, 5/1997		
	C63	HENION, JACK et al., "Capillary Electrophoresis/Mass Spectrometry: From One Meter Capillaries To Chip-Based Devices," 2 pages, 1999		
	C64	HERMANSON, Greg T. et al., "Chapter 2 - Activation Methods," Immobilized Affinity Ligand Techniques, Academic Press, pp. 2 cover pages, 51-136, 1992		
	C65	HICKS, JENNIFER, "Genetics And Drug Discovery Dominate Microarray Research," R&D Magazine, pp. 28-33, 2/1999		
	C66	HOFFMULLER, ULRICH et al., "In Vitro Evolution And Selection Of Proteins: Ribosome Display For Larger Libraries," Angew. Chem. Int. Ed., Vol. 37, No. 23, pp. 3241-3243, 1998		
	C67	HOPFGARTNER, GERARD et al., "Exact Mass Measurement Of Product Ions For The Structural Elucidation Of Drug Metabolites With A Tandem Quadrupole Orthogonal-Acceleration Time-Of-Flight Mass Spectrometer," Journal of The American Society for Mass Spectrometry, Vol. 10, pp. cover, 1305-1314, 12/1999		
	C68	HORN, HOWARD, "Lab Chips Sector: Microtechnologies Are Changing Healthcare And More," Life Sciences, pp. 19-21, 3/20/2001		
	C69	HORNBECK, LARRY J. et al., "Bistable Deformable Mirror Device," Spatial Light Modulators and Applications 1988 Technical Digest Series, Summaries of papers presented at the Spatial Light Modulators and Applications Topical Meeting, Optical Society of America, Vol. 8, Postconference Edition, A215, pp. 107-110, 6/15-17/1988		
	C70	HOSOKAWA, KAZUO et al., "Droplet-Based Nano/Picoliter Mixer Using Hydrophobic Microcapillary Vent," 1999 IEEE International Conference on Micro Electro Mechanical Systems, Technical Digest, pp. 388-393, 1999		
	C71	HOSOKAWA, KAZUO et al., "Handling Of Picoliter Liquid Samples In A Poly(dimethylsiloxane)-Based Microfluidic Device," Analytical Chemistry, Vol. 71, No. 20, pp. 4781-4785, 10/15/1999		
	C72	IKUTA, KOJI et al., "Three Dimensional Micro Integrated Fluid Systems (MIFS) Fabricated By Stereo Lithography," IEEE, pp. 1-6, 1994		
	C73	JACOBSON, KEN et al., "International Workshop On The Application Of Fluorescence Photobleaching Techniques To Problems In Cell Biology," Federation Proceedings, Vol. 42, No. 1, pp. 72-79, 1/1983		
	C74	JACOBSON, STEPHEN C. et al., "High-Speed Separations On A Microchip," Analytical Chemistry, Vol. 66, No. 7, pp. 1114-1118, 4/1/1994		
	C75	JACOBSON, STEPHEN C. et al., "Microfluidic Devices For Electrokinetically Driven Parallel And Serial Mixing," Analytical Chemistry, Vol. 71, No. 20, pp. 4455-4459, 10/15/1999		
	C76	JEFFREYS, ALEC J. et al., "Hypervariable 'Minisatellite' Regions In Human DNA," Nature, Vol. 314, pp. 67-73, 3/7/1985		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
			Examiner Name	Not Assigned	
Sheet	12	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C77	JERMAN, HAL, "Electrically-Activated, Normally-Closed Diaphragm Valves," Transducers '91, 1991 International Conference on Solid-State Sensors and Actuators, pp. cover, 1045-1048, 1991		
	C78	JERMUTUS, LUTZ, et al., "Recent Advances In Producing And Selecting Functional Proteins By Using Cell-Free Translation," Current Opinion in Biotechnology, Vol. 9, pp. 534-548, 1998		
	C79	JO, BYUNG-HO et al., "Fabrication Of Three-Dimensional Microfluidic Systems By Stacking Molded Polydimethylsiloxane (PDMS) Layers" SPIE, Vol. 3877, pp. 222-229, 9/1999		
	C80	JO, BYUNG-HO et al., "Three-Dimensional Micro-Channel Fabrication In Polydimethylsiloxane (PDMS) Elastomer," Journal of Microelectromechanical Systems, Vol. 9, No. 1, pp. 76-81, 3/2000		
	C81	JU, LI-YA et al., "Application Of Silver Staining To The Rapid Typing Of The Polymorphism Of HLA-DQ Alleles By Enzymatic Amplification and Allele-Specific Restriction Fragment Length Polymorphism," Electrophoresis, Vol. 12, pp. 270-273, 1991		
	C82	JUNG, D. R. et al., "Chemical And Physical Interactions At Metal/Self-Assembled Organic Monolayer Interfaces," pp. 1-54, 1994		
	C83	KAGAN, C. R., "Organic-Inorganic Hybrid Materials As Semiconducting Channels In Thin-Film Field-Effect Transistors," Science, Vol. 286, pp. 945-947, 10/29/1999		
	C84	KANTER, EVAN et al., "Analysis Of Restriction Fragment Length Polymorphisms In Deoxyribonucleic Acid (DNA) Recovered From Dried Bloodstains," Journal of Forensic Sciences, Vol. 31, No. 2, pp. 403-408, 4/1986		
	C85	KAPUR, RAVI et al., "Fabrication And Selective Surface Modification Of 3-Dimensionally Textured Biomedical Polymers From Etched Silicon Substrates," Journal of Biomedical Materials Research, Vol. 33, pp. 205-216, 1996		
	C86	KAWANO, YASUSHI et al., "Rapid Isolation And Identification Of Staphylococcal Exoproteins By Reverse Phase Capillary High Performance Liquid Chromatography-Electrospray Ionization Mass Spectrometry," FEMS Microbiology Letters, Vol. 189, pp. 103-108, 2000		
	C87	KELLER, RICHARD A. et al., "Single-Molecule Fluorescence Analysis In Solution," Applied Spectroscopy, Vol. 50, No. 7, pp. 12A-30A, 7/1996		
	C88	KENIS, PAUL J. A. et al., "Microfabrication Inside Capillaries Using Multiphase Laminar Flow Patterning," Science, Vol. 285, pp. 83-85, 7/2/1999		
	C89	KHOO, MELVIN et al., "A Novel Micromachined Magnetic Membrane Microfluid Pump," pp. 1-4, no date		
	C90	KIM, ENOCH et al., "Micromolding In Capillaries: Applications In Materials Science," J. Am. Chem. Soc., Vol. 118, No. 24, pp. 5722-5731, 1996		
	C91	KIM, ENOCH et al., "Polymer Microstructures Formed By Moulding In Capillaries," Nature, Vol. 376, pp. 581-584, 8/17/1995		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
			Examiner Name	Not Assigned	
Sheet	13	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C92	KIRK-OTHMER, "Concise Encyclopedia of Chemical Technology," John Wiley & Sons, 5 pages, no date	
	C93	KOPP, MARTIN U. et al., "Chemical Amplification: Continuous-Flow PCR On A Chip," Science, Vol. 280, pp. 1046-1048, 5/15/1998	
	C94	KUHN, LAWRENCE et al., "Silicon Charge Electrode Array For Ink Jet Printing," IEEE Transactions on Electron Devices, Vol. ED-25, No. 10, pp. 1257-1260, 10/1978	
	C95	KUMAR, AMIT et al., "Features Of Gold Having Micrometer To Centimeter Dimensions Can Be Formed Through A Combination Of Stamping With An Elastomeric Stamp And An Alkanethiol 'Ink' Followed By Chemical Etching," Appl. Phys. Lett., Vol. 63, No. 14, pp. 2002-2004, 10/4/1993	
	C96	KUMAR, AMIT et al., "Patterning Self-Assembled Monolayers: Applications In Materials Science," Langmuir, Vol. 10, pp. 1498-1511, 1994	
	C97	LAGALLY, ERIC T. et al., "Fully Integrated PCR-Capillary Electrophoresis Microsystem For DNA Analysis," Lab On A Chip, Vol. 1, pp. 102-107, 2001	
	C98	LAGALLY, ERIC T. et al., "Monolithic Integrated Microfluidic DNA Amplification And Capillary Electrophoresis Analysis System," Sensors and Actuators B, Vol. 63, pp. 138-146, 2000	
	C99	LAGALLY, E. T. et al., "Single-Molecule DNA Amplification And Analysis In An Integrated Microfluidic Device," Analytical Chemistry, Vol. 73, No. 3, pp. 565-570, 2/1/2001	
	C100	LAMMERINK, T. S. J. et al., "Modular Concept For Fluid Handling Systems," IEEE, pp. 389-394, 1996	
	C101	LAZAR, IULIA M. et al., "Novel Microfabricated Device For Electrokinetically Induced Pressure Flow And Electrospray Ionization Mass Spectrometry," Journal of Chromatography A, Vol. 892, pp. 195-201, 2000	
	C102	LESSARD, GUILLAUME A. et al., "A Scanning Apertureless Fluorescence Microscope," 8 pages, no date	
	C103	LEVINE, LEANNA M. et al., "Measurement Of Specific Protease Activity Utilizing Fluorescence Polarization," Analytical Biochemistry, Vol. 247, pp. 83-88, 1997	
	C104	LI, JIANJUN et al., "Integration Of Microfabricated Devices To Capillary Electrophoresis-Electrospray Mass Spectrometry Using A Low Dead Volume Connection: Application To Rapid Analyses Of Proteolytic Digests," Analytical Chemistry, Vol. 71, No. 15, pp. 3036-3045, 8/1/1999	
	C105	LICKLIDER, LARRY et al., "A Micromachined Chip-Based Electrospray Source For Mass Spectrometry," Analytical Chemistry, Vol. 72, No. 2, pp. 367-375, 1/15/2000	
	C106	LIN, L. Y. et al., "Free-Space Micromachined Optical Switches For Optical Networking," IEEE Journal of Selected Topics in Quantum Electronics, Vol. 5, No. 1, pp. 4-9, 1/1999	
	C107	LIN, YUEHE et al., "Laser Micromachined Isoelectric Focusing Device On Polymer Substrate For Electrospray Mass Spectrometry," SPIE, Vol. 3877, pp. 28-35, 9/1999	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.



Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
			Examiner Name	Not Assigned	
Sheet	14	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C108	LIU, HANGHUI et al., "Development Of Multichannel Devices With An Array Of Electrospray Tips For High-Throughput Mass Spectrometry," Analytical Chemistry, Vol. 72, No. 14, pp. 3303-3310, 7/15/2000		
	C109	LLOPIS, JUAN et al., "Ligand-Dependent Interactions Of Coactivators Steroid Receptor Coactivator-1 And Peroxisome Proliferator-Activated Receptor Binding Protein With Nuclear Hormone Receptors Can Be Imaged In Live Cells And Are Required For Transcription," PNAS, Vol. 97, No. 8, pp. 4363-4368, 4/11/2000		
	C110	LÖTTERS, J C et al., "The Mechanical Properties Of The Rubber Elastic Polymer Polydimethylsiloxane For Sensor Applications," J. Micromech. Microeng., Vol. 7, pp. 145-147, 1997		
	C111	LUCY, CHARLES A. et al., "Characterization Of The Cationic Surfactant Induced Reversal Of Electroosmotic Flow In Capillary Electrophoresis," Anal. Chem., Vol. 68, pp. 300-305, 1996		
	C112	MAHAJAN, NUPAM P. et al., "Novel Mutant Green Fluorescent Protein Protease Substrates Reveal The Activation Of Specific Caspases During Apoptosis," Chemistry & Biology, Vol. 6, No. 6, pp. 401-409, 6/1999		
	C113	MALUF, N., "An Introduction To Microelectromechanical Systems Engineering," Artech House Publishers, Boston London, pp. 42-45, 12/1999		
	C114	MANZ, A. et al., "Micromachining Of Monocrystalline Silicon And Glass For Chemical Analysis Systems," Trends in Analytical Chemistry, Vol. 10, No. 5, pp. 144-149, 1991		
	C115	MARSHALL, SID, "Fundamental Changes Ahead For Lab Instrumentation," R&D Magazine, 5 pages, 2/1999		
	C116	MARSILI, RAY, "Lab-On-A-Chip Poised To Revolutionize Sample Prep," R&D Magazine, 5 pages, 2/1999		
	C117	MAULE, JOHN, "Pulsed-Field Gel Electrophoresis," Molecular Biotechnology, Vol. 9, pp. 107-126, 1998		
	C118	MCDONALD, J. COOPER et al., "Fabrication Of Microfluidic Systems In Poly(dimethylsiloxane)," Electrophoresis, Vol. 21, pp. 27-40, 2000		
	C119	MOLDAVAN, ANDREW, "Photo-Electric Technique For The Counting Of Microscopical Cells," Science, Vol. 80, No. 2069, pp. 188-189, 8/24/1934		
	C120	MULLER, RICHARD S. et al., "Surface-Micromachined Microoptical Elements And Systems," Proceedings of the IEEE, Vol. 86, No. 8, pp. 1705-1720, 8/1998		
	C121	MURRAY, VINCENT et al., "Detection Of Polymorphisms Using Thermal Cycling With A Single Oligonucleotide On A DNA Sequencing Gel," Human Mutation, Vol. 2, pp. 118-122, 1993		
	C122	NAGAI, YASUO et al., "A Fluorescent Indicator For Visualizing cAMP-Induced Phosphorylation In Vivo," Nature Biotechnology, Vol. 18, pp. 313-316, 3/2000		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/801,361
				Filing Date	March 15, 2004
				First Named Inventor	Stephen R. Quake
				Art Unit	1743
				Examiner Name	Not Assigned
Sheet	15	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C123	NAKAMURA, YUSUKE et al., "Variable Number Of Tandem Repeat (VNTR) Markers For Human Gene Mapping," Science, Vol. 235, pp. 1616-1622, 3/27/1987		
	C124	NEW OBJECTIVE website, "What Is Electrospray," www.newobjective.com/electrospray/electrospray.html, 4 pages, 9/22/2000		
	C125	OLESCHUK, RICHARD D. et al., "Analytical Microdevices For Mass Spectrometry," Trends In Analytical Chemistry, Vol. 19, No. 6., pp. 379-388, 2000		
	C126	OLSSON, ANDERS et al., "Simulation Studies Of Diffuser And Nozzle Elements For Valve-Less Micropumps," Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, Chicago, Illinois, pp. 1039-1042, 6/16-19/1997		
	C127	O'REILLY, MARIE-ANNE J. et al., "The Technique Of Pulsed Field Gel Electrophoresis And Its Impact On Molecular Immunology," Journal of Immunological Methods, Vol. 131, pp. 1-13, 1990		
	C128	PARKER, GREGORY J. et al., "Development Of High Throughput Screening Assays Using Fluorescence Polarization: Nuclear Receptor-Ligand-Binding And Kinase/Phosphatase Assays," Journal of Biomolecular Screening, Vol. 5, No. 2, pp. 77-88, 2000		
	C129	PETHIG, RONALD et al., "Applications Of Dielectrophoresis In Biotechnology," Tibtech, Vol. 15, pp. 426-432, 10/1997		
	C130	PETTY, JEFFREY T. et al., "Characterization Of DNA Size Determination Of Small Fragments By Flow Cytometry," Anal. Chem., Vol. 67, pp. 1755-1761, 1995		
	C131	PROTANA website, "NanoES Products," www.protana.com/products/default.asp, 3 pages, 9/19/2000		
	C132	QIN, DONG et al., "Elastomeric Light Valves," Adv. Mater., Vol. 9, No. 5, pp. 407-410, 1997		
	C133	QIN, DONG et al., "Photolithography With Transparent Reflective Photomasks," J. Vac. Sci. Technol. B, Vol. 16, No. 1, pp. 98-103, 1/1998		
	C134	QUAKE, STEPHEN R. et al., "From Micro- To Nanofabrication With Soft Materials," Science, Vol. 290, pp. 1536-1540, 11/24/2000		
	C135	RAPP, R. et al., "LIGA Micropump For Gases And Liquids," Sensors and Actuators A, Vol. 40, pp. 57-61, 1/1994		
	C136	ROBERTS, RICHARD W. et al., "RNA-Peptide Fusions For The <i>In Vitro</i> Selection Of Peptides And Proteins," Proc. Natl. Acad. Sci. USA, Vol. 94, pp. 12297-12302, 11/1997		
	C137	ROUHI, MAUREEN, "Sizing, Sorting DNA One Piece At A Time," C&EN, pp. 5-6, 1/11/1999		
	C138	ROYLANCE, LYNN MICHELLE et al., "A Batch-Fabricated Silicon Accelerometer," IEEE Transactions on Electron Devices, Vol. ED-26, No. 12, pp. 1911-1917, 12/1979		
	C139	SAMAD, AKHTAR et al., "Optical Mapping: A Novel, Single-Molecule Approach To Genomic Analysis," Genome Research, pp. 1-4, 1995		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/801,361
				Filing Date	March 15, 2004
				First Named Inventor	Stephen R. Quake
				Art Unit	1743
				Examiner Name	Not Assigned
Sheet	16	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C140	SANJOH, AKIRA et al., "Spatiotemporal Protein Crystal Growth Studies Using Microfluidic Silicon Devices," Journal of Crystal Growth, Vol. 196, pp. 691-702, 1999		
	C141	SCHASFOORT, RICHARD B. M. et al., "Field-Effect Flow Control For Microfabricated Fluidic Networks," Science, Vol. 286, pp. 942-945, 10/29/1999		
	C142	SCHOMBURG, W. K. et al., "Fabrication Of Polymer Microcomponents With The AMANDA-Process," New Materials and Directions, Eurosensors XII, pp. 711-714, 9/13-16/1998		
	C143	SCHUELLER, OLIVIER J. A. et al., "Fabrication Of Glassy Carbon Microstructures By Soft Lithography," Sensors and Actuators A, Vol. 72, pp. 126-139, 1999		
	C144	SCHWARTZ, DAVID C. et al., "Optical Mapping Approaches To Molecular Genomics," Current Opinion in Biotechnology, Vol. 8, pp. 70-74, 1997		
	C145	SEETHALA, RAMAKRISHNA et al., "A Fluorescence Polarization Competition Immunoassay For Tyrosine Kinases," Analytical Biochemistry, Vol. 255, pp. 257-262, 1998		
	C146	SHEVCHENKO, ANDREJ et al., "Rapid 'de Novo' Peptide Sequencing By A Combination Of Nanoelectrospray, Isotopic Labeling And A Quadrupole/Time-Of-Flight Mass Spectrometer," Rapid Communications in Mass Spectrometry, Vol. 11, pp. 1015-1024, 1997		
	C147	SHINOHARA, JUN et al., "A High Pressure-Resistance Micropump Using Active And Normally-Closed Valves," IEEE, pp. 86-91, 2000		
	C148	SHOJI, SHUICHI, "Fluids For Sensor Systems," Topics in Current Chemistry, Vol. 194, pp. 167-188, 1998		
	C149	SHOJI, SHUICHI et al., "Smallest Dead Volume Microvalves For Integrated Chemical Analyzing Systems," Transducers '91, 1991 International Conference on Solid-State Sensors and Actuators, San Francisco, California, pp. cover, 1052-1055, 1991		
	C150	SMITS, J.G., "Piezoelectric Micropump With Three Valves Working Peristaltically," Sensors and Actuators, Vol. A21-A23, pp. 203-206, 1990		
	C151	SOHN, L. L. et al., "Capacitance Cytometry: Measuring Biological Cells One By One," PNAS, Vol. 97, No. 20, pp. 10687-10690, 9/26/2000		
	C152	STEMMER, WILLEM P. C. et al., "Rapid Evolution Of A Protein <i>in vitro</i> By DNA Shuffling," Nature, Vol. 370, pp. 389-390, 8/4/1994		
	C153	SWEET, RICHARD G., "Chapter 9 - Flow Sorters For Biologic Cells," Flow Cytometry and Sorting, John Wiley & Sons, pp. 5 cover pages and 177-189, 1979		
	C154	TAKAHASHI, AKIYUKI et al., "Measurement Of Intracellular Calcium," Physiological Reviews, Vol. 79, No. 4, pp. 1089-1125, 10/1999		
	C155	TATARI, ZOHREH et al., "HLA-Cw Allele Analysis By PCR-Restriction Fragment Length Polymorphism: Study Of Known And Additional Alleles," Proc. Natl. Acad. Sci. USA, Vol. 92, pp. 8803-8807, 9/1995		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
			Examiner Name	Not Assigned	
Sheet	17	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C156	TAWFIK, DAN S. et al., "Man-Made Cell-Like Compartments For Molecular Evolution," Nature Biotechnology, Vol. 16, pp. 652-656, 7/1998	
	C157	THOMPSON, L. F. et al., "Introduction To Microlithography," 185th Meeting of the American Chemical Society, Seattle, WA, pp. 2 cover pages, 1-13, 3/20-25/1983	
	C158	THORSEN, TODD et al., "Dynamic Pattern Formation In A Vesicle-Generating Microfluidic Device," Physical Review Letters, Vol. 86, No. 18, pp. 4163-4166, 4/30/2001	
	C159	TODD, PAUL et al., "Chapter 12 - Cell Electrophoresis," Flow Cytometry and Sorting, John Wiley & Sons, pp. 5 cover pages and 217-229, 1979	
	C160	TUFTE, O. N. et al., "Silicon Diffused-Element Piezoresistive Diaphragms," Journal of Applied Physics, Vol. 33, No. 11, pp. 3322-3327, 11/1962	
	C161	Ullmann's Encyclopedia of Industrial Chemistry, Sections 6 to 6.3, Topic: Carbon Black, Sixth Edition, 7 pages, 1999	
	C162	UNGER, MARC A. et al., "Single-Molecule Fluorescence Observed With Mercury Lamp Illumination," Biotechniques, Vol. 27, No. 5, pp. 1008-1014, 11/1999	
	C163	VAN DE POL, F.C.M. et al., "A Thermo-Pneumatic Actuation Principle For A Microminiature Pump And Other Micromechanical Devices," Sensors and Actuators, Vol. 17, Nos. 1-2, pp. 139-143, 5/3/1989	
	C164	VAN DE POL, F.C.M. et al., "Micro Liquid Handling Devices - A Review," Micro Systems Technologies, Vol. 90, pp. 799-805, 1990	
	C165	VAN DEN BERG, A. et al., "Micro Total Analysis Systems," Proceedings of the $\mu$ TAS '94 Workshop, University of Twente, The Netherlands, 17 pages, 11/21-22/1994	
	C166	VAN DILLA, M. A. et al., "Cell Microfluorometry: A Method For Rapid Fluorescence Measurement," Science, Vol. 163, pp. 1213-1214, 3/14/1969	
	C167	VAN DILLA, MARVIN A. et al., "Chapter 2 - Introduction And Resume Of Flow Cytometry And Sorting," Flow Cytometry and Sorting, John Wiley & Sons, pp. 5 cover pages and 11-37, 1979	
	C168	VERPOORTE, ELISABETH M. J. et al., "Three-Dimensional Micro Flow Manifolds For Miniaturized Chemical Analysis Systems," J. Micromech. Microeng., Vol. 7, pp. 246-256, 1994	
	C169	VIEIDER, CHRISTIAN et al., "A Pneumatically Actuated Micro Valve With A Silicon Rubber Membrane For Integration With Fluid Handling Systems," Transducers '95, 8th International Conference on Solid-State Sensors and Actuators and Eurosensors IX, Stockholm, Sweden, pp. 284-286, 6/25-29/1995	
	C170	VOLKMUTH, W. D. et al., "DNA Electrodifusion In A 2D Array Of Posts, Physical Review Letters, Vol. 72, No. 13, pp. 2117-2120, 3/28/1994	
	C171	VOLKMUTH, W. D. et al., "DNA Electrophoresis In Microlithographic Arrays," Nature, Vol. 358, pp. 600-602, 8/13/1992	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/801,361	
			Filing Date	March 15, 2004	
			First Named Inventor	Stephen R. Quake	
			Art Unit	1743	
			Examiner Name	Not Assigned	
Sheet	18	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C172	WASHIZU, MASAO et al., "Molecular Dielectrophoresis Of Biopolymers," IEEE Transactions on Industry Applications, Vol. 30, No. 4, pp. 835-843, 7/1994		
	C173	WHITESIDES, GEORGE M. et al., "Flexible Methods For Microfluidics," Physics Today, pp. 42-48, 6/2001		
	C174	WHITESIDES, GEORGE M. et al., "Soft Lithography In Biology And Biochemistry," Annu. Rev. Biomed. Eng., Vol. 3, pp. 335-373, 2001		
	C175	WILBUR, JAMES L. et al., "Lithographic Molding: A Convenient Route To Structures With Sub-Micrometer Dimensions," Adv. Mater., Vol. 7, No. 7, pp. 649-652, 1995		
	C176	WILM, MATTHIAS et al., "Femtomole Sequencing Of Proteins From Polyacrylamide Gels By Nano-Electrospray Mass Spectrometry," Nature, Vol. 379, pp. 466-469, 2/1/1996		
	C177	XIA, YOUNAN et al., "Complex Optical Surfaces Formed By Replica Molding Against Elastomeric Masters," Science, Vol. 273, pp. 347-349, 7/19/1996		
	C178	XIA, YOUNAN et al., "Micromolding Of Polymers In Capillaries: Applications In Microfabrication," Chem. Mater., Vol. 8, No. 7, pp. 1559-1566, 1996		
	C179	XIA, YOUNAN et al., "Reduction In The Size Of Features Of Patterned SAMs Generated By Microcontact Printing With Mechanical Compression Of The Stamp," Adv. Mater., Vol. 7, No. 5, pp. 471-473, 1995		
	C180	XU, BING et al., "Making Negative Poisson's Ratio Microstructures By Soft Lithography," Adv. Mater., Vol. 11, No. 14, pp. 1186-1189, 1999		
	C181	XU, JINGDONG et al., "Room-Temperature Imprinting Method For Plastic Microchannel Fabrication," Analytical Chemistry, Vol. 72, No. 8, pp. 1930-1933, 4/15/2000		
	C182	XU, XIANG et al., "Detection Of Programmed Cell Death Using Fluorescence Energy Transfer," Nucleic Acids Research, Vol. 26, No. 8, pp. 2034-2035, 1998		
	C183	XUE, QIFENG et al., "Integrated Multichannel Microchip Electrospray Ionization Mass Spectrometry: Analysis Of Peptides From On-Chip Tryptic Digestion of Melittin," Rapid Communications In Mass Spectrometry, Vol. 11, 1253-1256, 1997		
	C184	XUE, QIFENG et al., "Multichannel Microchip Electrospray Mass Spectrometry," Analytical Chemistry, Vol. 69, No. 3, pp. 426-430, 2/1/1997		
	C185	YANG, T. J. et al., "An Apertureless Near-Field Microscope For Fluorescence Imaging," Applied Physics Letters, Vol. 76, No. 3, pp. 378-380, 01/17/2000		
	C186	YANG, XING et al., "A Low Power MEMS Silicone/Parylene Valve," Solid-State Sensor and Actuator Workshop, Hilton Head Island, South Carolina, 4 pages, 6/7-11/1998		
	C187	YANG, XING et al., "A MEMS Thermopneumatic Silicone Membrane Valve," IEEE 10th Annual International Workshop of Micro Electro Mechanical Systems, Nagoya, Japan, pp. cover, 114-118, 1/26-30/1997		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/801,361
				Filing Date	March 15, 2004
				First Named Inventor	Stephen R. Quake
				Art Unit	1743
				Examiner Name	Not Assigned
Sheet	19	of	19	Attorney Docket Number	20174C-001140US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C188	YAZDI, NAVID et al., "Micromachined Inertial Sensors," Proceedings of IEEE, Vol. 86, No. 8, pp. 1640-1659, 8/1998		
	C189	YOUNG, A. M. et al., "Contoured Elastic-Membrane Microvalves For Microfluidic Network Integration," Journal of Biomechanical Engineering, Vol. 121, pp. 2-6, 2/1999		
	C190	ZACCOLO, MANUELA et al., "A Genetically Encoded, Fluorescent Indicator For Cyclic AMP In Living Cells," Nature Cell Biology, Vol. 2, pp. 25-29, 1/2000		
	C191	ZENGERLE, R. et al., "A Micro Membrane Pump With Electrostatic Actuation," Micro Electro Mechanical Systems '92, Travemünde, Germany, pp. 19-24, 2/4-7/1992		
	C192	ZENGERLE, R. et al., "Performance Simulation Of Microminiaturized Membrane Pumps," 7th International Conference on Solid-State Sensors and Actuators, Yokohama, Japan, pp. 2 cover pages, 106-109, 6/7-10/1993		
	C193	ZHANG, B. et al., "Microfabricated Devices For Capillary Electrophoresis-Electrospray Mass Spectrometry," Analytical Chemistry, Vol. 71, No. 15, pp. 3258-3264, 8/1/1999		

60634989 v1

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.